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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,929	11/26/2003	Joseph P. Rynd	25226A	1182

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OWENS CORNING
2790 COLUMBUS ROAD
GRANVILLE, OH 43023

EXAMINER	
WOLLSCHLAGER, JEFFREY MICHAEL	
ART UNIT	**PAPER NUMBER**
1791	

MAIL DATE	DELIVERY MODE
12/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/722,929	RYND ET AL.	
	Examiner	Art Unit	
	Jeff Wollschlager	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 October 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,10-15,21,23,25 and 26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8, 10-15, 21, 23, 25 and 26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's amendment to the claims filed October 3, 2007 has been entered. Claims 1, 10-13, and 21 are currently amended. Claims 25 and 26 are new. Claims 9, 16-20, 22, and 24 have been canceled. Claims 1-8, 10-15, 21, 23, 25 and 26 are pending and under examination.

Claim Objections

Claims 12 and 13 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 12 and 13 recite Montmorillonite, which is a nanoclay. However, the limitation in claim 1 directed to "nano-clays" has been canceled as part of the current amendment. The examiner submits that in view of the amendment to claim 1, the remaining nanoclay limitations in claims 12 and 13 appear to be an oversight.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 21 and 23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 21 recites an acicular nano-particle having at least one dimension less

than 100 angstroms selected from nano-clays, calcium carbonate, intercalated graphites and expanded graphites. While the original disclosure provides support for calcium carbonate meeting the claimed limitations, the original disclosure does not convey possession of acicular nano-clays or graphites with at least one dimension less than 100 angstroms. This rejection can be overcome by pointing to the page and line number showing where support for the limitation may be found.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-8, 10-15, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grinshpun et al. (WO 2001/39954) in view of Morgenstern (US 6,589,646) or Nelson et al. (US 2005/0027040).

Regarding claims 1 and 25, Grinshpun et al. teach a method of manufacturing a rigid foam (Figure 6; page 10, lines 5-30) comprising: incorporating fillers and reinforcing materials such as graphite, conductive carbon black and nanofillers into a polymer (page 17 lines 12-20) and at least one nucleating agent (page 19, line 38 – page 20, line 5), incorporating a blowing agent into the melt under a first pressure and a first temperature (page 20, lines 7-30), extruding the polymer melt under a second pressure and temperature to allow the polymer melt to expand and foam, and cooling the foamed product (page 21, lines 9-30) to produce a foam consisting primarily of blends of polystyrene (page 14, line 41-page 15 line 4; page 24), with a cell size ranging from 25 to 7000 micrometers (page 23, lines 11-15). Grinshpun et al. do not explicitly teach that the nano-particles or nucleating agents employed are calcium carbonate, intercalated or expanded graphite having the claimed particle size

However, Morgenstern discloses that calcium carbonate having a particle size as low as 0.005 um (50 angstroms) may be employed as an inorganic filler/nucleating agent in foam applications (Abstract; col. 2, lines 58-67) and Nelson et al. discloses employment of inorganic additives such as montmorillonite and calcium carbonate in nanocomposites, including foam nanocomposites, having a particle size as low as about 2 nm (20 angstroms) (paragraphs [0008; 0012, 0040-0041, 0051, 0056, 0079].

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have employed the calcium carbonate disclosed by either of Morgenstern or Nelson et al. while practicing the method of Grinshpun for the purpose, as suggested by either of Morgenstern or Nelson et al. of providing an adequately reinforced foam material.

As to claims 2-4, Grinshpun teaches blends primarily comprising polystyrene (page 14, line 41-page 15 line 4; page 24).

As to claims 5 and 6, Grinshpun teaches various blowing agents may be employed (page 18, lines 6-30).

As to claims 7 and 8, Grinshpun teaches incorporating additives into the polymer melt such as nucleation agents, fillers and pigments (page 17, lines 12-20; page 19, line 38 - page 20, line 30).

As to claims 10-13, Morgenstern discloses employment of from 0.1 to 10% by weight of the filler/nucleating agent (col. 3, lines 1-4) and Nelson discloses a modified montmorillonite (Abstract; paragraphs [0018, 0040-0041, 0051, 0056, 0079]).

As to claims 14 and 15, Grinshpun teaches the foam has a density of 8 to 640 kg/m^3 (page 13, lines 4-22; page 24, lines 25-37) and that the cell size is between 25 and 7000 micrometers (page 23, lines 11-15). Grinshpun is silent as to the other cell structure parameters. However, the combination employs the same claimed materials and the same claimed process. Accordingly, the same claimed physical properties and effects would intrinsically be achieved by the practice of the combined method.

As to claim 26, Nelson discloses a modified montmorillointe (Abstract; paragraphs [0018, 0040-0041, 0051, 0056, 0079]).

Claims 1-8, 10-15, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. (WO 01/40362) in view of Morgenstern (US 6,589,646) or Nelson et al. (US 2005/0027040).

Regarding claims 1 and 25, Miller et al. teach the basic claimed process of producing an extruded rigid foam to yield an insulating panel (page 10, lines 21-24) wherein a blowing agent is incorporated into the polymer melt at a first pressure and temperature (page 6, line 5-31); extruding the polymer melt under a second pressure and temperature to form a foam and

intrinsically cooling the foam to form a product with a cell size within the claimed range (page 2, line 19-page 3, line 24; page 9, line 13-page 10, line 25). The preferred polymer melt includes an alkenyl aromatic polymer material, such as polystyrene (page 3, line 25- page 4, line 28). Miller et al. further teach that optional additives may be included to obtain desired foam characteristics (page 5, lines 8-15), but do not disclose incorporating nanoparticles as claimed.

However, Morgenstern discloses that calcium carbonate having a particle size as low as 0.005 um (50 angstroms) may be employed as an inorganic filler/nucleating agent in foam applications (Abstract; col. 2, lines 58-67) and Nelson et al. discloses employment of inorganic additives such as montmorillonite and calcium carbonate in nanocomposites, including foam nanocomposites, having a particle size as low as about 2 nm (20 angstroms) (paragraphs [0008; 0012, 0040-0041, 0051, 0056, 0079].

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have employed the calcium carbonate disclosed by either of Morgenstern or Nelson et al. while practicing the method of Miller et al. for the purpose, as suggested by either of Morgenstern or Nelson et al. of providing an adequately reinforced foam material.

As to claims 2-4, Miller et al. preferably employ polystyrene at greater than 95% and blending with a non-alkenyl aromatic polymer (page 3, line 25- page 4, line 23).

As to claim 5 and 6, Miller et al. disclose carbon dioxide as well as various other blowing agents (page 6, line 5- page 7, line 18).

As to claims 7 and 8, Miller et al. disclose adding the additives to the resin/foamable gel (page 5, lines 8-15) and include plasticizers and flame-retardants.

As to claims 10-13, Morgenstern discloses employment of from 0.1 to 10% by weight of the filler/nucleating agent (col. 3, lines 1-4) and Nelson discloses a modified montmorillonite (Abstract; paragraphs [0018, 0040-0041, 0051, 0056, 0079]).

As to claims 14 and 15, Milller et al. recite some of the physical properties of the foam (page 9, lines 13- page 10, line 27). Further, the combination teaches the same claimed process with the same claimed materials. It follows that the method produces a product with the same claimed physical properties and effects.

As to claim 26, Nelson discloses a modified montmorillointe (Abstract; paragraphs [0018, 0040-0041, 0051, 0056, 0079]).

Claims 1-8, 10-15, 21, 23, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. (WO 01/40362) in view of Chen et al. (WO 2003/055804) and Tan (US 7,160,929).

Note: Citations to Chen et al. are from the US equivalent document US 2004/0234443.

Regarding claims 1, 21 and 25, Miller et al. teach the basic claimed process of producing an extruded rigid foam to produce an insulating panel (page 10, lines 21-24) wherein a blowing agent is incorporated into the polymer melt at a first pressure and temperature (page 6, line 5-31); extruding the polymer melt under a second pressure and temperature to form a foam and intrinsically cooling the foam to form a product with a cell size within the claimed range (page 2, line 19-page 3, line 24; page 9, line 13-page 10, line 25). The preferred polymer melt includes an alkenyl aromatic polymer material, such as polystyrene (page 3, line 25- page 4, line 28). Miller et al. further that optional additives may be included to obtain desired foam characteristics (page 5, lines 8-15) and employ talc and titanium dioxide as nucleating agents (page 4, line 30-

page 5, line 5; page 1, line 28-34), but do not disclose incorporating nanoparticles as claimed in claim.

However, Chen et al. disclose calcium carbonate whiskers/needles having a particle size as low as 10 nm (100 angstroms) and Tan discloses employment of nanofibers and nanopowders, such as calcium carbonate, in the production of nanocomposite foams (Abstract; col. 1, lines 18-64; col. 3, lines 1-21; col. 3, lines 64-67; col. 4, lines 63-col. 5, lines 17; col. 8, lines 25-34).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have employed a nanofiller, such as an acicular calcium carbonate, having a particle size of less than 100 angstroms in the method of Chen, as suggested by Chen et al. and Tan, for the purpose, as suggested by Tan, of producing a lightweight material having superior mechanical properties (col. 3, lines 15-20). Further, regarding the exact particle size of the calcium carbonate, the examiner submits that at the upper end of the range "less than 100 angstroms" one skilled in the art would have expected the calcium carbonate to have had the same properties as at the lower end of the range disclosed by Chen et al. (i.e. 100 angstroms). See MPEP 2144.05 I.

As to claims 2-4, Miller et al. preferably employ polystyrene at greater than 95% and blending with a non-alkenyl aromatic polymer (page 3, line 25- page 4, line 23).

As to claim 5 and 6, Miller et al. disclose carbon dioxide as well as various other blowing agents (page 6, line 5- page 7, line 18).

As to claims 7 and 8, Miller et al. disclose adding the additives to the resin/foamable gel (page 5, lines 8-15) and include plasticizers and flame-retardants.

As to claims 10-13, one having ordinary skill would have readily optimized the amount of filler to employ as is routinely practiced in the art.

As to claims 14 and 15, Milller et al. recite some of the physical properties of the foam (page 9, lines 13- page 10, line 27). Further, the combination teaches the same claimed process with the same claimed materials. It follows that the method produces a product with the same claimed physical properties and effects.

As to claim 23, the combination teaches the method as set forth above. It follows that the foam produced necessarily has the same claimed effects and physical properties.

As to claim 26, the calcium carbonate produced by Chen et al. is reasonably considered to have been modified (Abstract).

Claims 1-8, 10-15, 21, 23, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grinshpun et al. (WO 2001/39954) in view of Chen et al. (WO 2003/055804) and Tan (US 7,160,929).

Note: Citations to Chen et al. are from the US equivalent document US 2004/0234443.

Regarding claims 1, 21, and 25 Grinshpun et al. teach a method of manufacturing a rigid foam (Figure 6; page 10, lines 5-30) comprising: incorporating fillers and reinforcing materials such as graphite, conductive carbon black and nanofillers into a polymer (page 17 lines 12-20) and at least one nucleating agent (page 19, line 38 – page 20, line 5), incorporating a blowing agent into the melt under a first pressure and a first temperature (page 20, lines 7-30), extruding the polymer melt under a second pressure and temperature to allow the polymer melt to expand and foam, and cooling the foamed product (page 21, lines 9-30) to produce a foam consisting primarily of blends of polystyrene (page 14, line 41-page 15 line 4; page 24), with a cell size ranging from 25 to 7000 micrometers (page 23, lines 11-15). Grinshpun does not specify the shape (e.g. acicular) or particle size of the fillers and reinforcing materials.

However, Chen et al. disclose calcium carbonate whiskers/needles having a particle size as low as 10 nm (100 angstroms) and Tan discloses employment of nanofibers and nanopowders, such as calcium carbonate, in the production of nanocomposite foams (Abstract; col. 1, lines 18-64; col. 3, lines 1-21; col. 3, lines 64-67; col. 4, lines 63-col. 5, lines 17; col. 8, lines 25-34).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have employed a nanofiller, such as an acicular calcium carbonate, having a particle size of less than 100 angstroms in the method of Grinsphun, as suggested by Chen et al. and Tan, for the purpose, as suggested by Tan, of producing a lightweight material having superior mechanical properties (col. 3, lines 15-20). Further, regarding the exact particle size of the calcium carbonate, the examiner submits that at the upper end of the range "less than 100 angstroms" one skilled in the art would have expected the calcium carbonate to have had the same properties as at the lower end of the range disclosed by Chen et al. (i.e. 100 angstroms). See MPEP 2144.05 I.

As to claims 2-4, Grinshpun teaches blends primarily comprising polystyrene (page 14, line 41-page 15 line 4; page 24).

As to claims 5 and 6, Grinshpun teaches various blowing agents may be employed (page 18, lines 6-30).

As to claims 7 and 8, Grinshpun teaches incorporating additives into the polymer melt such as nucleation agents, fillers and pigments (page 17, lines 12-20; page 19, line 38 - page 20, line 30).

As to claims 10-13, one having ordinary skill would have readily optimized the amount of filler to employ as is routinely practiced in the art.

As to claims 14 and 15, Grinshpun teaches the foam has a density of 8 to 640 kg/m^3 (page 13, lines 4-22; page 24, lines 25-37) and that the cell size is between 25 and 7000 micrometers (page 23, lines 11-15). Grinshpun is silent as to the other cell structure parameters. However, the combination employs the same claimed materials and the same claimed process. Accordingly, the same claimed physical properties and effects would intrinsically be achieved by the practice of the combined method.

As to claim 23, the combination teaches the method as set forth above. It follows that the foam produced necessarily has the same claimed effects and physical properties.

As to claim 26, the calcium carbonate produced by Chen et al. is reasonably considered to have been modified (Abstract).

Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grinshpun et al. (WO 2001/39954) in view of Lee et al. (U.S. Patent 6,759,446).

Regarding claims 25 and 26, Grinshpun et al. teach a method of manufacturing a rigid foam (Figure 6; page 10, lines 5-30) comprising: incorporating fillers and reinforcing materials such as graphite, conductive carbon black and nanofillers into a polymer (page 17 lines 12-20) and at least one nucleating agent (page 19, line 38 – page 20, line 5), incorporating a blowing agent into the melt under a first pressure and a first temperature (page 20, lines 7-30), extruding the polymer melt under a second pressure and temperature to allow the polymer melt to expand and foam, and cooling the foamed product (page 21, lines 9-30) to produce a foam consisting primarily of blends of polystyrene (page 14, line 41-page 15 line 4; page 24), with a cell size ranging from 25 to 7000 micrometers (page 23, lines 11-15). Further, Grinshpun discloses employment of additives such as flame retardants, pigments and extrusion aids (page 19, lines 21-37; page 17, lines 12-20; page 19, line 38 - page 20, line 30). Grinshpun et al. do not

explicitly teach that the nano-particles/nano-fillers employed are nano-clays, intercalated or expanded graphite or the particle size of the fillers and reinforcing materials.

However, Lee et al. teach an analogous method of producing a rigid foam product where nano-clays are utilized (col. 1, line 41-col. 2, line 55) with a thickness of <1 nanometer (nm) (col. 1, line 50-58) and specifically employs a modified nano-Montmorillonite intercalated with polystyrene.

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have employed the nanoclays disclosed by Lee et al. while practicing the method of Grinshpun for the purpose, as suggested by Lee et al., of improving the physical properties of the foam (col. 1, line 41 – col. 2, line 22).

Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. (WO 01/40362) in view of Kresta et al. (US 6,518,324).

Regarding claims 25 and 26, Miller et al. teach the basic claimed process of producing an extruded rigid foam to yield an insulating panel (page 10, lines 21-24) wherein a blowing agent is incorporated into the polymer melt at a first pressure and temperature (page 6, line 5-31); extruding the polymer melt under a second pressure and temperature to form a foam and intrinsically cooling the foam to form a product with a cell size within the claimed range (page 2, line 19-page 3, line 24; page 9, line 13-page 10, line 25). The preferred polymer melt includes an alkenyl aromatic polymer material, such as polystyrene (page 3, line 25- page 4, line 28). Miller et al. disclose adding the additives to the resin/foamable gel (page 5, lines 8-15) and disclose plasticizers and flame-retardants. Further, the examiner notes that the additives are optional in the claim. Miller et al. further states that optional additives may be included to obtain

desired foam characteristics (page 5, lines 8-15), but do not disclose incorporating nanoparticles as claimed.

However, Kresta et al. teach employment of nanoclays in polymer foams, such as polystyrene foam, having a thickness of about 3 – 1000 Angstroms (Abstract; col. 1, line 10 – col. 2, line 15). Kresta et al. disclose plate-like nano-montmorillonite at a weight range from 0.01 to 10 part per hundred (col. 1, line 44-col. 2, line 15). The nanoclays are extruded with a major portion of polystyrene (Kresta: col. 1, lines 62-67). As such, the nanoclay is modified.

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have employed the nanoclays disclosed by Kresta et al. in the method disclosed by Miller et al., for the purpose, as suggested by Kresta et al. of producing a foam with improved thermal insulation values (Abstract).

Response to Arguments

Applicant's arguments filed October 3, 2007 have been fully considered, but are moot in view of the new grounds of rejection. However, the examiner notes that the scope of new claim 25 is substantially identical to the scope of claim 1 prior to the current amendment since the additives are recited as being optional.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Wollschlager whose telephone number is 571-272-8937. The examiner can normally be reached on Monday - Thursday 7:00 - 4:45, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JW

Jeff Wollschlager
Examiner
Art Unit 1791

CHRISTINA JOHNSON
SUPERVISORY PATENT EXAMINER

December 18, 2007